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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,506	02/05/2002	Masatoshi Imai	59227/SONYP	2876

24201 7590 04/14/2005

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EXAMINER	
NGUYEN, CAM LINH T	
ART UNIT	**PAPER NUMBER**
2161	

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/072,506	IMAI, MASATOSHI	
	Examiner	Art Unit	
	CamLinh Nguyen	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's remarks to the Office Action are acknowledged. Consequently, claims 1 – 17 are currently pending.

2. Applicant's arguments with respect to claims 1 - 17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4 – 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

♦ In the Preamble of claims 4 and 11, Applicant(s) claims an apparatus for comparing magnitudes of pieces of input data. However, in the body of the claims, the Examiner does not see any tangible hardware of medium that can be carried out the method.

♦ Claims 11 – 17 refer to ""second basic cells", "second data comparator", "second data selector", second select signal", but the Examiner couldn't find where is the "first" for these terms.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1 – 17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The basis of this rejection is set forth in a two-prong test of:

(1) whether the invention is within the technological arts; and

(2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological art. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological art fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a method claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

As to technological arts recited in the preamble, mere recitation in the preamble (i.e., intended or field of use) or mere implication of employing a machine or article of manufacture to perform some of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble. In Bowman (Ex parte Bowman, 61 USPQ2d 1665, 1671 (BD. Pat. App. & Inter. 2001) (Unpublished), the board affirmed the rejection under U.S.C. 101 as being directed to non-statutory subject matter. Although Bowman discloses transforming physical media into a chart and physically plotting a point on said chart, the Board held that the claimed invention is nothing more than an abstract idea, which is not tied to any technological art or environment.

In the present case, although claims 1 - 17recite an abstract idea of a method for a sort processing method, however, the language of the claims raise a question as to whether the claim

is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101, which can be implemented by the mind of a person or by the use of a pencil and paper (see also in 112 section above). In another words, since the claimed invention, as a whole, is not within the technological arts as explained above, these claims only constitute an idea and does not apply, involve, use, or advance the technological arts, thus, it is deems to be directed to non-statutory subject matter.

7. To expedite a complete examination of the instant application the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of application amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1 – 8, 11 – 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawata Tetsuro (U.S. 5,274,777).

♦ As per claims 1, 4, 11,

Kawata discloses a sort processing method for comparing magnitudes of pieces of input data with each other and rearranging said pieces of input data in accordance with results of comparison (col. 1, lines 30 – 34), said method comprising the step of:

- " Repeating basic processes, each of which is composed of a combination of a comparison processing and a selection processing, in a pipeline configuration, said comparison processing being used to compare magnitudes of pieces of input data with each other by using data comparators and said selection processing being used to select pieces of input data by using data selectors" See Fig. 4, col. 1, lines 35 – 65, col. 4, lines 23 – col. 5, lines 22.
- " Wherein the total number of said basic processes is equal to the number of combinations of pieces of input data to be compared" See col. 5, lines 54 – 58.

♦ As per claims 2, 6, 13, Kawata discloses:

- "A sort processing method according to claim 1 wherein the size of sort processing is increased by raising the number of basic processes to keep up with an increase in the number of pieces of input data" col. 2, lines 57 - 63.

♦ As per claims 3, 7, 14, Kawata discloses:

- "A sort processing method according to claim 1 whereby, if necessary, a clock signal is used for synchronizing said pieces of input data" See the abstract, col. 3, lines 65 – 68.

♦ As per claims 5, 8, 12, 15, Kawata discloses:

- "A sort processing apparatus according to claim 4 wherein said first data selector is provided with a pair of data selectors used for receiving a pair of pieces of input data; and said first data selector is controlled on the basis of said first select signal so as to allow

output terminals of said data selectors to output said pair of pieces of input data in a predetermined magnitude order" See Fig. 1 and associated texts.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 9 – 10, 16 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawata Tetsuro (U.S. 5,274,777) in view of Lewis et al (U.S. 6,775,667).

♦ As per claims 9, 16,

Kawata does not clearly disclose:

"A sort processing apparatus according to claim 4 wherein, if the number of said pieces of input data is odd, an invalid piece of input data is added to said valid pieces of input data to make the total number of said pieces of input data even, and said invalid piece of input data is set at a value greater than a maximum among said valid pieces of input data or a value smaller than a minimum among said valid pieces of input data".

However, Lewis, on the other hand, discloses a sort processing method that disclosed this limitation in Col. 11, lines 13 – 15.

It would have been obvious to one with ordinary skill in the art at the time the invention was made to apply the teaching of Lewis into the system of Kawata because the combination would speed up the sort processing.

♦ As per claims 10, 17, Kawata/Lewis disclose:

- "A sort processing apparatus according to claim 4 wherein said first basic cells are laid out over a rectangular area" See Fig. 2 – 3 Lewis.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Steven et al (U.S. 3,931,612) discloses a sort apparatus and data processing system.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CamLinh Nguyen whose telephone number is 571 – 272 - 4024. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571 – 272 - 4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nguyen, Cam-Linh

Art Unit 2161

ALFORD KINDRED
PRIMARY EXAMINER